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Electricity on the Farm

A MONTHLY MAGAZINE FOR THE UP-TO-DATE RURAL FAMILY

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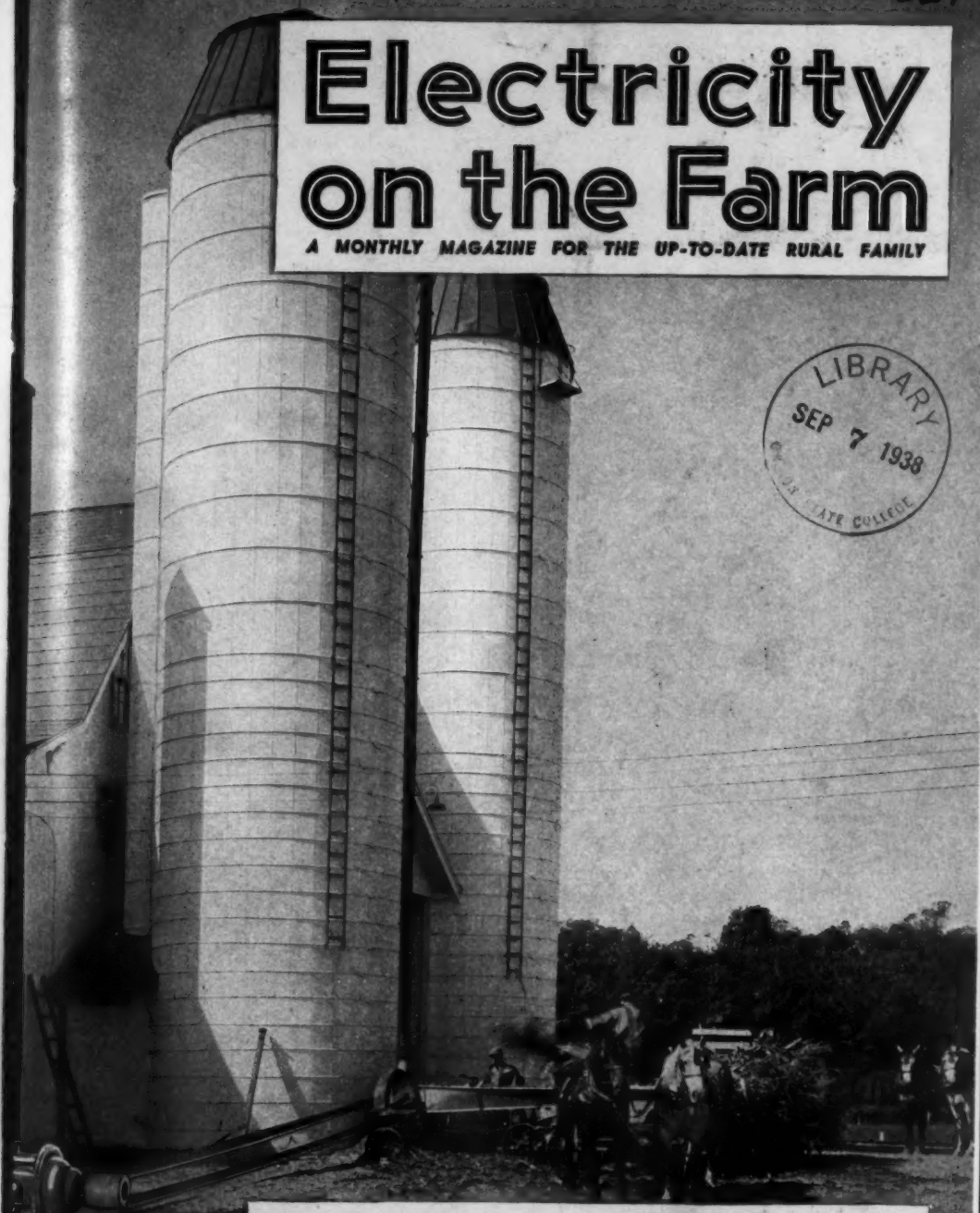

SEPTEMBER
1938

SEE INSIDE BACK COVER FOR COVER TITLE CONTEST

IN THIS ISSUE

Motors for Silo Filling—Kitchen Management—60c. for a Bridge Lamp—Spray Paint and Save—Farm Plumbing

Take the ARM *out of* FARM *with General Electric Motors*

DO you know that small electric motors will run all your hand-operated machines and most of your stationary farm machines at extremely low cost?

Low electric rates and efficient equipment make electricity the lowest-cost power on your farm. With recent reductions in prices of General Electric motors you can now buy, for as little as $6.85, a small G-E motor that will operate such machines as a water pump, washing machine, churn, cream separator, grindstone, concrete mixer, lathe, or drill. Power costs only about a cent for each hour of actual use.

There is a G-E motor ideally suited for every farm job. The all-service portable farm-chore motor is so equipped that it can be quickly and easily moved from one machine to another. It can be used to oper feed grinder, silo filler, hay hoist, elevator saw, Hundreds of farmers depend on their G-E portable motors to provide convenient, low-cost power for many farm jobs without hired help.

It will pay you to investigate how you can profit by electric motors on your farm.

General Electric has just issued a nontechnical book, *Electric Motors for the Farm*, which is chock-full of practical information. It shows you how you can use electric motors, you what type is best for each job, how much each and where to buy. Write today for a free copy

General Electric Co.
Dept. 6R-201, Schenectady, N. Y.

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- ☐ Also send your 52-page farm book, *Electric Helpers for the Farm Family*, GED-641

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Editor's Chat

EYES AND THE CHILD

School time is about here again.

We send children to school to learn things which will help them to get along in the world. Learning means lessons. Lessons require study. To study we need light—light in the school and light in the home.

Poor light, and that may mean insufficient light, glaring light, unbalanced lighting or light from the wrong direction, has several bad effects. It promotes headaches; it makes study difficult; it sometimes results in poor grades; and worse still, it may send a child out into the world handicapped with poor vision and impaired health, an offset to the very thing we send him to school to gain—aids for getting along in the world.

No school board should be guilty of handicapping children while attempting to help them. Neither should a parent. It costs money to send children to school, your money, the school district's money. You want results. It has been proved by trial that good illumination results in better school work and fewer failures. Is your child having a harder time in school than others because he has poor light to study by? That's a poor investment in education.

It costs very little to provide good illumination for study in the home. I.E.S. lamps are best. Take your pencil and figure. Good light is cheaper than eyes and health.

—I'm proud I am a farmer—

I'M HAPPY

Denver, Colo. In a few more days I will have completed a trip of about 9,000 miles through many sections of the United States and into Mexico. All the way I have talked and been talked to about the use of electricity on the farm. Now I am more enthusiastic about it than ever. You would be too.

There's Harvey Morris down near Charlotte, N. C., who returned to the farm after 30 years in town, and starting with 5 cows and electricity in 1932, has built up one of the best and most profitable dairies in that section. He said he wouldn't even start dairying without electricity.

Tom Calloway wore a mile of smiles when he told me how he had saved his tomato crop in North Georgia with electric insect traps while an adjacent field was practically worthless.

When Mrs. Coppage told the plumber, "If you ever attempt to take that water system away from me, you'll have to take me with it," *she meant it.* And it was not for love of the plumber.

Down in Las Cruces, New Mexico, where it gets pretty hot, some 200 people are using Desert Coolers with little motor driven fans to keep their houses cool. Many of these houses are small and built of adobe (mud) bricks.

Then there was L. N. Irwin near Davis, California, who with the aid of electricity on a small dairy farm had raised a family of six children, three of whom are college graduates and one a senior, and where earnings have averaged about $1,000 per year for 15 years.

Mr. and Mrs. Tom G. Goodin of Hillsboro, Ore., left no doubt in my mind about the pleasure and money-saving of their 25 cu. ft. refrigerator with two compartments, one-half being for holding fruit, vegetables and meat in frozen condition.

I. Van Der Born near Portland had increased his income about $750 by installing an electric pump for irrigating a filbert nursery.

And there were enough more happy folks whose smiles if lined up together would reach—anybody's heart. They are happy. My job through ELECTRICITY ON THE FARM is to help make more of you farm folks happy. I'm happy.

GEO. W. KABLE

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Another Modern Dairy Farm Installs McCORMICK-DEERING Dairy Equipment

Modern buildings in a well arranged grouping at the Murray Farms.

This McCormick-Deering Milk Cooler keeps milk in top-notch condition at Murray Farms.

The swing to McCormick-Deering Dairy Equipment on the farms of leading dairymen and breeders finds another satisfied user added to the list. He is Mr. J. J. Murray, owner of Murray Farms, Kalamazoo, Mich.

"We have had our McCormick - Deering 10 - can Milk Cooler in operation for the last three months," says Mr. Murray, "and it has given us wonderful satisfaction. We have been particularly pleased with the results because we are told by the creamery purchasing our milk that it is coming into their plant in excellent condition."

In addition, Mr. Murray has been so well pleased with his cooler that a McCormick-Deering Milker has been installed.

* * * *

You, too, can experience the satisfaction of using profit-making dairy equipment when you choose McCormick-Deering Milk Coolers, Milkers, and Cream Separators. Ask the nearby McCormick-Deering dealer for full information.

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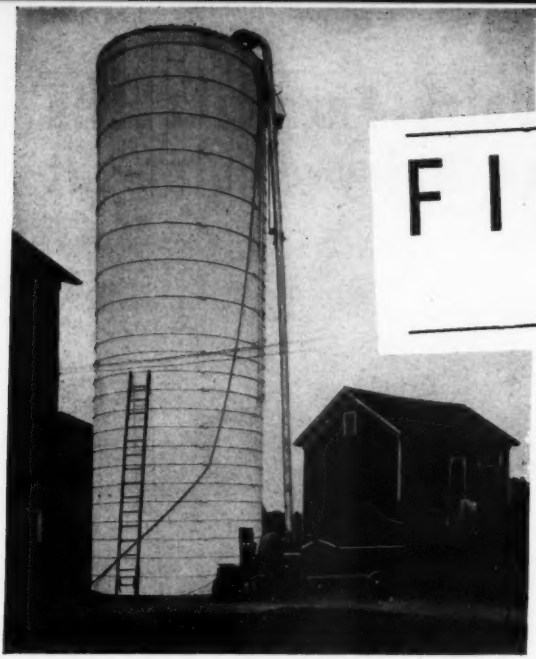


FILLING WITH 5 AND

By D. G. EBINGER

Seven tons of ensilage were put into this silo per hour. A 13-inch cutter and 5-H.P. motor did the job.

THE use of electric power for filling silos has been practiced on many Michigan farms for several years. The five and seven and one-half horse power motors have been widely publicized as the proper electric power units to do the job. Yet many farmers, particularly those who have just recently received central station electric service, are asking the questions: Is the five or seven and one-half horse power motor large enough to handle this job on a practical basis? Can I afford to own a motor to do this job?

A few days ago I was talking with Fred Hayward of Scotts, Michigan, on this subject of silo filling with small electric power units. Mr. Hayward has a five horse power motor on his farm and has used it to fill his silo for ten years. "We have plenty of tractor power available," Mr. Hayward told me, "but the convenience, the low-cost of power and the fact that the boys can do the job without any additional men to make up a crew makes electric power the most economical and desirable for me." Mr. Hayward expressed the thoughts of many other Michigan farmers who have used electric power for this particular job.

On most of our farms single phase service is the only form available, and motors larger than five or seven and one-half horse power are not practical to use. The five horse power motor, however, will supply ample power for the proper operation of a twelve to sixteen inch filler, cutting and elevating up to seven tons an hour, provided a few simple adjustments are made and the filler is in good mechanical condition. A filler smaller than 12 inches requires too much care in feeding.

To replace the twenty or thirty horse-power gas tractor or steam engine with a small five or seven and one-half horse-power electric motor just isn't possible unless we understand how the modern filler works and the few necessary adjustments that must be made. In the first place, the ensilage is not blown into the silo; modern fillers are designed to throw the cut fodder up the pipe. For this reason the elevating wings must be in very close adjustment to the housing so that each paddle can readily pick up its load and toss it into the silo. With some of the older machines it may be necessary to fasten extensions to the elevating wings to get a close fit with the housing. If extensions are installed, the fan should be carefully rebalanced so that it will not vibrate at high speeds.

What we might call high speeds to-day would have been a relatively low speed a few years ago on some of the older cutters. A machine with a 44 or a 46 inch elevating fan will very nicely put corn into a forty foot silo at a speed of 400 revolutions per minute. It is probable that a larger pulley will have to be installed on the cutter, particularly the older models. A five inch pulley on the motor and a twenty-two inch pulley on the filler is a good combination and will give about the right speed. One of the greatest savings in power comes with a speed reduction as mentioned above. It has been found that a cutter operated with a five horse power motor would take as much as seven times that amount of power if the speed were increased to 800 revolutions per minute with comparatively little increase in the rate of cutting.

Before the corn can be thrown into the silo it must be cut up and too often the condition of the cutting head is overlooked. True, we occasionally replace the knives with sharp ones, knowing that dull knives require considerable more power than when sharp (often as much as 50% more) but the knife is only half of the cutting device, the ledger plate or shear bar is the other half of this mechanism and it should be kept sharp and adjusted just as close as possible to the knives without striking them. This kind of adjustment will give a shearing action with a minimum of power required. Last fall I saw a filler in operation that wasn't working very well and I don't see how it could. One could easily slip his fingers between the shear plate and the knives. The cutting action or rather should I say the tearing action was eating up power that should have gone into proper cutting and

THE SILO
7½ H.P. MOTORS

The motor may be mounted directly on the ensilage cutter frame. Idling pulley is used to give belt tension.

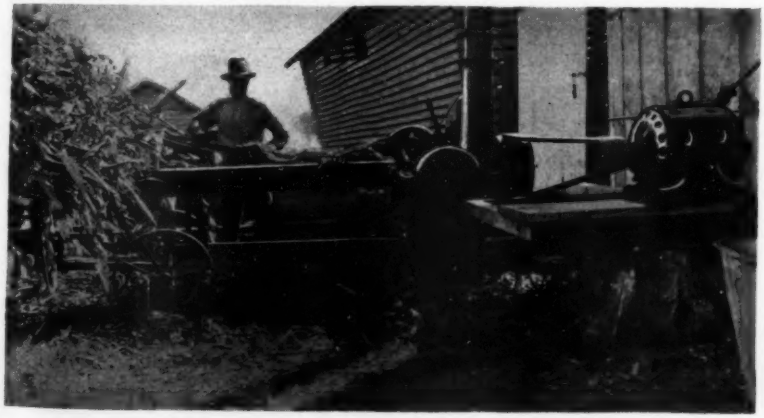
elevating. Sharp knives (changed every half day of running time) in close adjustment with a sharp shear will give a well-cut, uniform product so highly desired by cattle men.

Mr. Hayward likes to use his five horse power motor on the filler because it doesn't require a large crew, in fact, it really doesn't require any crew at all. One man can handle the job all alone on a practical and efficient basis. If the corn bundles are reasonable in size they can be fed into the machine by the man on the wagon, no additional hand feeding is required, and can be lapped on each other from one-third to one-half of the length of the bundle. The electric motor can be started and stopped very readily, thus it is immediately available when the loaded wagon pulls up to the filler and will not be consuming fuel when the teamster is loading up in the field. While it takes a couple of days for Mr. Hayward to fill his 10' x 34' silo he doesn't have to spend additional time running around the neighborhood helping other members of the "ring." He is better able to take care of his own chores and give more attention to his herd of registered Jersey cows.

A silo filler handling properly fed bundles through a closely adjusted, sharp cutting head and running at a speed just sufficient to throw the corn into the silo usually shows a varying power requirement of from three to fifteen horse power. The five or seven and one-half h.p. electric motor, unlike other forms of power, has the ability to adjust itself to this varying power demand. A good motor has the ability to handle as high as a 300% overload for short periods of time. Periods of time long enough, however, to take care of those peak periods when the butts of the bundles are passing through the machine.

The belt which transmits the power from the motor should just be reasonably tight. A belt too loose will slip somewhat at the motor pulley and operation will not be satisfactory; on the other hand, one that is stretched too tight will cause

(*More on page* 15)



Whole bundles may be fed directly into the cutter. It is interesting to the neighbors.

View of kitchen arrangement before modernization.

Good Equipment Is Only One Step Toward a Good Kitchen. It Must Be Properly Arranged for Working and Saving Steps and Must Be Well Lighted to Give Maximum Satisfaction

BETTER KITCHEN MANAGEMENT SAVES TIME, ENERGY AND EXPENSE

By MRS. GEO. E. HATCH

Mrs. Hatch is a farm woman of New Milford, Connecticut. She writes from personal experience.

I HAVE learned from my own experience that a kitchen is truly modern only when:

1. The equipment performs economically.
2. The equipment is arranged so as to cut down footsteps and unnecessary movements in the preparation of meals.
3. Enough cabinet space is provided to permit convenient storage of cooking utensils, foodstuffs and cleaning accessories.
4. The color scheme makes the surroundings bright, cheerful and easy to keep clean. Good lighting is a great aid in this direction, and very essential to prevent eyestrain and headaches.

These are the requirements I set up when planning my new kitchen before we moved into the house we now live in. To make sure I didn't overlook anything before starting, I consulted the kitchen planning specialist of the electric light company, and he added suggestions which made my plans complete.

From my previous kitchen experiences, I learned that a well made electric range outmoded other types of cookery, because it is clean, inexpensive to operate, cooks, bakes and broils perfectly, and in hot weather it doesn't heat up the kitchen when in use—especially during canning season. The automatic control features prevent my food from shrinking, burning or drying out, giving me extra time to do other things. During canning season I can my preserves in one third less time and the range keeps temperatures uniform all during the processes, which is very important.

My electric refrigerator costs only one fourth as much to run as ice, and besides I can make frozen desserts and keep perishable foods safe for a longer period of time, without spoilage. This is a great saving in our household budget.

The double drain board sink is a great help in dish washing. Small portable electric appliances, of course, are a great convenience, providing you

Left side of kitchen arrangement, showing "cooking center", consisting of range surrounded by handy-to-reach storage cabinets and drawers. Portal cut in wall permits convenience of passing dishes to and from dining room.

Center section of kitchen layout, showing "washing center" with sink surrounded by easily accessible drawers, cabinets, and table-top area.

have enough electric outlets to which to connect them.

Now all this is just modern equipment which I selected for the reasons I gave, but unless these various pieces were arranged properly to help me in the preparation of my meals, I wouldn't have a modern kitchen. So the next step in my plan was to work out a practical arrangement for everything so I wouldn't be walking all over the kitchen to get things from one side or the other. By analyzing the steps taken in preparing a given recipe, I found that the refrigerator should be on the right side of my kitchen when facing the side where the sink is located, and the range should be on the left side. This arrangement reduces the number of footsteps and movements I take in preparing and cooking a meal.

Unless the utensils are within reach of the place where a meal is being prepared, a kitchen is far from being organized to save footsteps, time and energy. So I planned to have plenty of cabinet storage space above my kitchen equipment. I know from past experience that the arrangement for storing foodstuffs, dishes, pots and pans in a pantry next to the kitchen results in much running back and forth for things, which is tiresome and confusing. So I got a neighbor cabinet builder who went to school with Mr. Hatch, to design and build the cabinets for me.

And I did not forget the electric convenience outlets for the appliances and kitchen lights. It is cheaper to do this wiring when the kitchen is under reconstruction than later when everything is finished. I had electric convenience outlets installed just below the storage cabinets where I frequently use my electric appliances. A 60 watt ceiling light over the sink provides illumination on a cloudy day and after dark while washing dishes, and for the same reason, I planned for a 40 watt wall light over my range. A 100 watt ceiling style globe fixture in the middle of the ceiling distributes soft diffused light throughout the kitchen.

Mr. Hatch built a radio speaker with my initials on the face, and placed it on a shelf over the refrigerator. The speaker is connected to our radio set in the living room, so when I'm listening to a program in the living room, I don't miss any of it if I go into the kitchen for something.

We have converted the storeroom, just off the kitchen, into a convenient laundry room where my electric washing machine washes all of our laundry. A small electric motor pumps water from a well for our household uses, and for our poultry barn and dairy needs.

This modern electric kitchen permits me to make a full course dinner completely in one hour's time. In my old kitchen it would have taken 2 hours or longer to prepare and cook the same meal. I now enjoy more free time for social activities, and besides, my strength and energy is greatly conserved so that I'm not all tired out at the end of the day. Our electric bill for operating my kitchen and laundry equipment, the lights in the house, dairy barn and poultry shed, and for the milk cooler and water pump, averages only 28 cents a day. Surely, no housewife can afford to go on wearing herself out by using old-fashioned and inefficient kitchen equipment if she really wants to enjoy life.

Right wing of Mrs. Hatch's kitchen, featuring "preparing center", consisting of refrigerator, adjacent work shelf and nearby storage cabinets.

Katy Didn't—know that glaring light from an old bridge lamp which makes seeing harder, and casts weird shadows around a room—can be simply and inexpensively remedied.

Katy Did—find that a "diffusing" bowl can easily be attached to the socket beneath the shade, and that it will make seeing more comfortable and make the room look better as well.

HOW TO REMAKE YOUR BRIDGE LAMP for 60¢

By HELEN G. McKINLAY

Miss McKinlay is Home Lighting Specialist, General Electric Company, Nela Park, Cleveland.

IT is good to know that some of the old type bridge lamps may be brought more nearly up-to-date for as little as sixty cents and a trip to the Dime Store! And best of all, the lamp will not only LOOK better but also you will be able to SEE more comfortably in the bargain.

Many people think that if they merely "tip" the old bridge lamp they will get better "service" from it, but in the process, usually the bulb either glares down at you from beneath the shade or at someone sitting across the room. So remember,—NO TIPPING! Oh dear, what can the matter be, light from the bridge lamp does glare! And now let's see what we may do to correct it.

In remaking your bridge lamp, first consider the necessary ingredients for the recipe. In this case they may be purchased at many of the dime, chain, or local dealer stores. Assuming that the lamp to be remodelled is similar to the one pictured, and bearing in mind that this is a compromise only, the parts we shall need for this remaking job, are first, a plastic bowl, secondly, a small metal "holder," and thirdly, a white lined lamp shade of generous proportions, just large enough at the top to fit the top of the plastic bowl. The shade and bowl used here each cost twenty-five cents, and the metal holder (sometimes called a "Uno" holder) costs ten cents.

The ingredients for this recipe are put together in this way: Loosen the screw near the downturned bulb socket of the bridge lamp so that it may be turned up, directly opposite to its previous position. Then tighten the screw so that it will hold the socket upright. The metal holder has a threaded ring which screws to the socket, and by tightening the set-screws they hold the bottom of the plastic bowl in place. Next lower the arm of the lamp about six inches on the shaft. The drawings show the various unassembled parts while the pictures will give you the resultant effect of the lighted change itself. You may also be interested to know that if you use a 100 watt bulb in this lamp it costs a half a cent or less an hour to burn.

Most of the newer lamps we see today designed to provide better lighting carry white bowls of glass or plastic beneath their shades. There must be some very good reason for this otherwise we would not find them in such abundance nor accepted with such acclaim. The reason is that the bowl hides the bulb and softens the downward

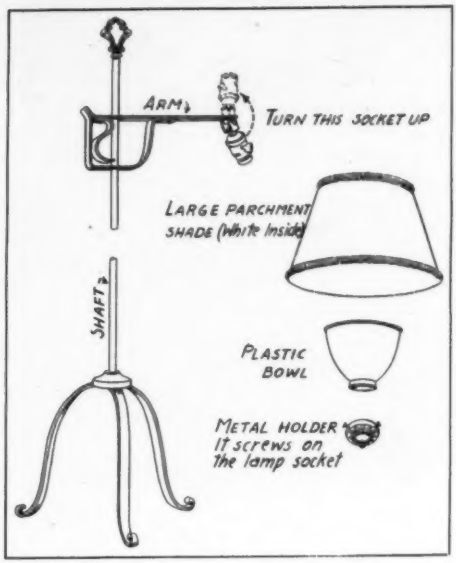
light by "diffusion" as it is sifted through the bowl. The bowl also puts light on the upper walls and ceiling helping to light a room more evenly than in days gone by when lamps seemed to stand in little pools of light directly beneath them as though they were stuck there!

Glass or Plastic Bowls Used

Some of the bowls are made of glass, while others are of a plastic material,—not unlike a ping-pong ball. The plastic bowls are light in weight and therefore more satisfactory when used on a bridge lamp arm as shown here. Quite an innovation is a new plastic bowl with a screw base which eliminates the need for the metal holder as suggested above. These bowls are made in six and eight inch sizes (across the top) and it is usually more desirable to use the larger sized bowl when possible. Sometimes, however, the larger bowl which requires a larger shade interferes with the shaft or with the arm of the lamp, and then the six inch size may be resorted to. The newer screw type bowls are easier to use but they may not be easy to find in your home town store as yet, since they are so very new.

The parts which go into the making of the newer types of lamps have come out of many new ideas and painstaking research in lighting and seeing, and we should rejoice that it is possible for us to benefit by such findings and the fact that newer merchandise as a result of these new ideas may now be had.

Indeed it is good to know that we may make over some of our old lamps since frequently we are partial to certain ones of them,—and by bringing them up to date they will add greatly to our living comfort. Like old slippers, old lamps wear well, but sometimes they need new souls!



Parts for a rejuvenated bridge lamp.

A Letter from Elmer . . .

HE SAVES $53 BY PAINTING WITH A SPRAY GUN

I am pleased to share this letter from Elmer Meacham of Madison, Wis. with you. Judging from his experience, the farm buildings might be "spruced up" and made to last longer at a pretty small expense. It sounds to me as if this might suggest something to Future Farmers and Club Boys with an eye for business and beauty; or possibly spray painting would be a good community club project.—G. W. K.

Dear George:

Vera and I would like to have you folks come out and see us. I've just finished painting the house, and it looks so nice we're mighty proud of it.

I did it myself. No, I haven't been taking a vacation. By using one of the little motor driven air compressors and a really good spray gun, I did the whole thing without losing a minute from my regular job. Best of all, I saved over ⅞ of what it would have cost to hire the painting done.

The total cash outlay for paint, oil, turpentine, putty, etc. was $7.18. *At our rates all the electric power I used cost less than a nickel. Last time we had the house painted, the paint shop down town charged* $60.00, *and we were not dissatisfied. So you see the little motor and I earned nearly* $53.00 *in a few Saturday afternoons.*

Some time ago Robert Warner and I bought the power painting outfit together. We are both delighted with the time it saves and the way it paints places we could hardly get at by hand at all. This was the first time we have had a clear comparison of what a commercial painter would charge for the same work. But we were perfectly sure the machine had already more than saved the $30.00 *it cost, so there is nothing to be added to my house painting job for investment in equipment.*

The heart of our outfit is a little diaphragm type air compressor. It is belt driven at about 900 rpm by a 1/3 H. P. electric motor. Both

A big piece of cardboard makes a simple shield for keeping paint off of where you don't want it. The little diaphragm type air compressor is the heart of the spray equipment. It is driven by a 1/3-H.P. motor.

are mounted on the same steel base and provided with a handle so one man can carry them anywhere. This supplies air at pressures up to 40 pounds. To deliver it to the gun there is air hose enough to reach the highest place we have to paint.

There are all sorts of air brushes or spray guns on the market, but it pays to get a good one. Ours has a pressure feed. Attached to the gun itself is an air tight cup that holds a quart of paint. That can be removed and the paint can be supplied through a hose from a separate tank that may hold from one to five gallons. In either case the paint is forced to the spray nozzle under pressure.

You know, George, there has been a lot of piffle written about how hard it is for a beginner, a green horn, to do a good job with a paint sprayer. There is no mystery about it. All you have to do is to learn all about your gun from the manufacturer's directions, watch what happens with different adjustments, and use your common sense.

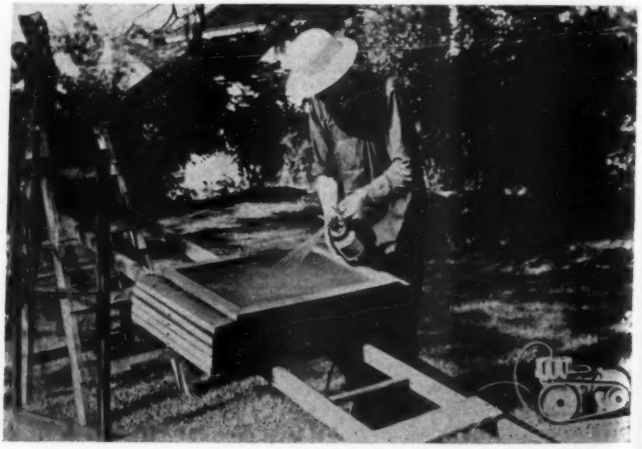
Most manufacturers put out a good gun and full instructions, but the buyer has to furnish the common sense. Anybody with a little knack for such things will do about as good a job the first time he tries a sprayer as he did the first time he used a brush. The only difference is most of us have used brushes more or less all our lives.

An air brush may throw sprays of various shapes, but for house painting the thin flat fan of finely atomized paint is most convenient. It may be horizontal or, by giving the nozzle a quarter turn, you can set the fan of spray up on edge. This verticle fan is best when painting back and forth across a wall. When you have a well adjusted spray, all there is to painting is to move it smoothly and uniformly over the surface—and to keep going.

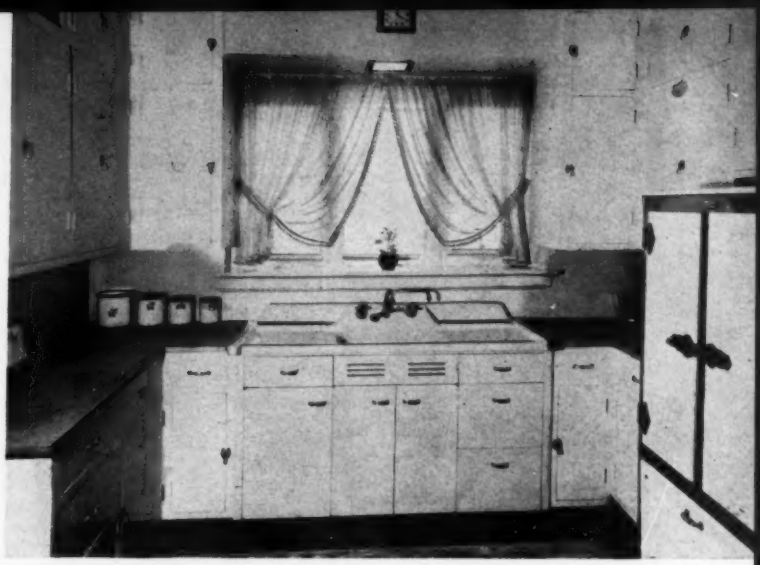
The common tendency of the beginner is to put on too much paint. The gun is so much faster than a brush that you do not realize how fast you can go. When you hesitate with a brush nothing happens, but if you stop a spray gun with the throttle wide open, you'll have a puddle of paint right away. To avoid all that while you are learning you can adjust the throttle to deliver only a little paint when you pull the trigger. That makes the work slow, but it lets you examine what you are doing till you get the feel of the thing. Then, when you get onto some big wall space, you can open her up and throw paint, high, wide, and perfectly beautiful.

But I must give you the details of this job. Because our house is a brick and stucco bungalow, maybe you think there isn't much to paint. But what there is, is hard to do with a brush. That is why I considered that bill of $60.00 *a fair price for the job. You know the roof comes down to eaves all around. There are no gables and the eaves reach out three feet beyond the walls on all sides. It takes*

(*More on page 22*)



Spraying right through a pile of screens coats them all; and there's little waste. The spray gun is fine for painting picket fences, too.



This U-shaped kitchen plan is regarded by home economics experts as the most efficient and step-saving. Note the beautiful cabinet sink with faucets set in a sloping panel, safety ledge for glassware, high gooseneck spout, and abundance of cabinets and drawers.

PLUMBING

FOR THE FARM HOME—Part 1

Some Things to Look Out for in Planning the Plumbing Layout and Selecting Fixtures. Kitchen Sinks — Bathroom Stools — Lavatories

By NORMAN J. RADDER, Secretary
Plumbing and Heating Industries Bureau

THE plumbing system for the farm home may be divided into three parts: The supply system consisting of the well, pump, tank, and piping; the utilization system, consisting of the plumbing fixtures; and the disposal system, consisting of the soil and waste piping, septic tank, and disposal area.

This three-fold classification is for convenience in discussion only. Actually the entire system must operate as a unit. A weakness or defect in one part will inevitably impede the efficient operation of the other parts. Thus if the water supply piping is improperly sized or incorrectly installed, water will not flow freely from the faucets. Similarly, if the septic tank is inadequate in capacity there will be a backing up of waste water which will seriously interfere with the operation of the fixtures.

Applicable and equally important for all three parts of the plumbing system for the farm home are these essentials:

1. Proper design and careful planning;
2. Correct installation;
3. Good quality.

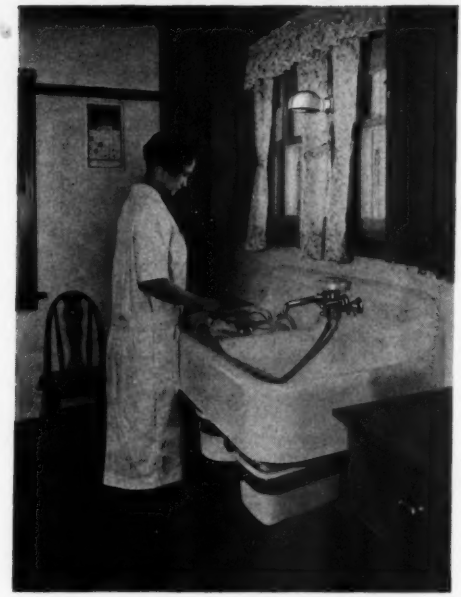
The first essential is a plan for the entire system. In the making of this plan due consideration should be given to ultimate capacity as well as immediate needs. Growth of the family with consequent need for additional bathtubs and toilets should be taken into consideration in the design of the supply system and the waste disposal system.

Correct installation is a matter of the utmost importance. It is a mistake to assume that all that is required is merely the cutting of a few threads and the connection of the supply and waste pipes with the fixtures. A plumbing system, properly installed, will give years of trouble-free performance. If improperly installed it may be an annoyance, an expense, and may, under certain conditions, prove a menace to health instead of the aid to health which it should be.

The importance of quality is better understood today than it was some years ago. Quality simply means the kind of plumbing fixtures, pipe, valves, and fittings that will give good service without expense for repairs over a long period of years.

Kitchen Plumbing Eliminates Drudgery

The first place to eliminate the drudgery of carrying fresh water and waste water is in the kitchen. To provide an abundant supply of running water at the kitchen sink should be the first object of the farm plumbing system. Here is where a few dollars invested in the pumping equipment, pipes, and



A double compartment apron type sink equipped with rinsing hose and swinging containers, one for garbage and the other for kitchen utensils. Note that with a deep sink of this kind it is best to place the top of the sink higher than the tops of adjacent work tables. This makes it possible to handle the dishes in the bottom of the sink without stooping, and at the same time have the table tops at a comfortable height.

the sink will bring the greatest return in the conservation of time and energy.

There are, of course, many kinds and sizes of sinks available for the farm home ranging from the small flat rim style to the roll rim and apron types and the latest cabinet models. Until a few years ago, cabinet sinks were not within the means of the average family. Today, however, thanks to mass production, the latest kinds of enameled iron cabinet sinks with handsome steel cabinets and roomy drawers underneath are made at a price to fit even the modest budget.

The outstanding advantage of the cabinet sink obviously is the fact that it provides an abundance of storage space for pots and pans, knives and forks, towels and dishcloths, right at the point of use.

Cabinet sinks are made in three sizes. The largest size has two drainboards and one basin and is 60 inches long and 20 inches wide. The other sizes are 52 by 20 and 42 by 20, but these models have only one drainboard and one basin. The largest size is the only one which should be considered for farm use because of the need for the working space which the 60 inches of sink provides.

The latest model cabinet sinks incorporate many desirable features such as a combination stopper and strainer; a hose for spraying vegetables and rinsing dishes; a combination swinging spout faucet set high to avoid interference with large pans; safety ledge for stemware; and grooved drainboards. Cabinet sinks are made all in one piece with no dirt-catching crevices, thus leaving no lurking place for germs. Three-way faucets permitting the use of both cistern water and well water may be obtained, if required.

Cabinet sinks are made with a low back to facilitate placing under the windows. A toe recess permits the housewife to stand close to the sink while working. Two styles of cabinet sinks are shown in illustrations A and B, whereas an apron type is shown in cut C.

No other single piece of household equipment in the farm home is used so much as the sink. From before breakfast to late at night, the sink is in use. It is particularly important, therefore, that the sink be of ample size and be made of durable materials. It has been the experience of the plumbing industry that sinks made of acid-resisting enamel fused on rigid cast iron are unsurpassed for durability.

Fixtures for the Bathroom

To have the comfort and convenience of an indoor toilet and a modern bathroom is one of the major advantages of running water. There is available for the farm family today a wide selection of plumbing fixtures for the bathroom—fixtures that fit every purse and every requirement.

In buying plumbing fixtures, it is well to seek the advice of an experienced plumbing contractor who can point out differences which are not always evident to the layman. Take closets, for instance. To persons not familiar with plumbing, two closets standing side by side may look alike. Yet one may be made with a large trapway which will not be likely to clog with normal use. Its interior will be finished with care and be perfectly smooth. The other may have a much smaller trapway and the side walls of the trap may be rough, thus catching paper with the result that it will clog readily.

One closet, due to the bowl construction and the quality of the flushing mechanism, will flush very quietly. It will hardly be audible in the next room. The other closet, which may be exactly the same in appearance, will be so poorly constructed that it can be heard at a considerable distance from the bathroom.

The one-piece and the close-coupled closets which have been introduced in recent years have, besides the advantage of improved appearance, a very quiet flushing action. Special seats designated as "sheet covered" are preferable because they are non-absorbent and add much to the appearance of the bathroom.

Wash Bowls of China and Iron

Lavatories are made of vitreous china or enameled iron. An acid-resisting finish for all enameled iron plumbing fixtures such as lavatories, tubs, sinks, and laundry trays, is preferable. This cannot be harmed by medicines which may be spilled.

A china lavatory is as easy to clean as a china plate. It will retain its lustre indefinitely because it is china all the way through. It will not chip or look grimy with age.

In the selection of a lavatory, care should be taken to buy one large enough so that water will not drip from the elbows of the user onto the floor. Many lavatories today are being made with a shelf at the back. An integral shelf is a great convenience for the placing of toilet articles.

One of the newest developments in lavatory de-

sign is a cabinet under the basin. This offers a very convenient place for toilet articles, accessories, and bathroom cleaning powders.

Metal handles for faucets are preferable to china handles. Breakage of the latter has sometimes resulted in cuts and bruises. A combination faucet which permits the user to wash in tempered water is preferable to two separate faucets.

Chromium Plating Best

The better faucets are plated with chromium. Cheaper faucets are nickel-plated. Chromium is desirable because it needs no polishing and because it is non-tarnishing and non-corrosive.

The better showerheads, too, are chromium-plated. Of particular interest to the farmer who is installing a shower in the bathroom or in a basement washroom is the new type of water-saving showerhead which offers an economy of 40 per cent in the use of water. With less water required, there is also an economy in the heating of water.

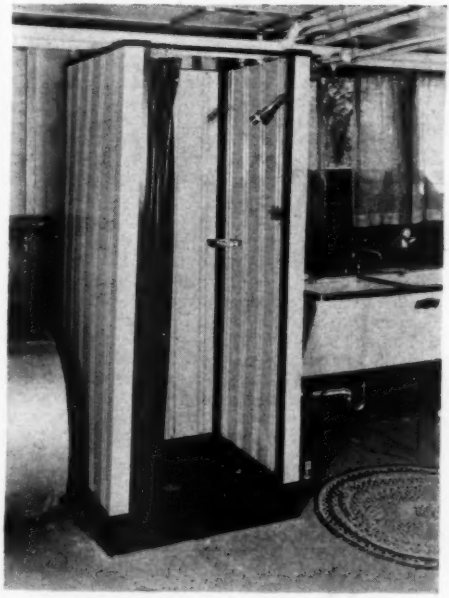
Only about two inches in diameter, this midget head concentrates its stream on the body, gives a stimulating shower, and virtually non-clogging.

In addition to a shower over the tub, many farm families have a shower in a cabinet or stall either in the basement or in connection with the first-floor washroom. Some modern farm homes have a shower in a cabinet somewhere on the first floor where it is easily accessible from outdoors. There is no need to remind rural people that nothing is more refreshing after a hard day's work than a brisk shower.

Shower cabinets are made of steel. They are shipped knocked down so that they can be assembled in very cramped quarters. They are made in various sizes and models, the least expensive being 30 inches square and 76 inches high. This type shown in illustration H is particularly suitable for the farm home. The base of the cabinet is so constructed that it is absolutely leak-proof.

* * *

EDITOR'S NOTE. *The second half of this article will follow in a later issue. It deals with the selection of bath tubs, the sizes of plumbing fixtures, the space needed for a bathroom, and the selection of piping, valves and fittings. Save this issue for the complete story.*



Easy to install and a source of endless joy for all members of the family is this metal prefabricated shower cabinet. While this view shows a basement installation, a shower cabinet like this may be installed anywhere, inasmuch as the cabinet base is leakproof.

Filling the Silo

(*Here from page 7*)

undue wear on the motor bearings. The length of the belt is not particularly important. Some motors are mounted on the frame of the filler in which case a very short belt is used, an idling pulley is then required to give belt tension. Portable motors are usually not fastened to the cutter but are "set" according to the length of the belt used.

One of these relatively small motors while not representing a high power investment might not be the cheapest power for the silo filling job even though it will put a ton of fodder in the silo on one kilowatt hour of electric energy. If a tractor is available and there would be no other work for the electric motor it would not be a good business proposition to have the five or seven and one-half motor setting around the farm for 362 days a year just to have it available for two or three days for silo filling. If additional work for the motor is available such as sawing wood, husking corn, operating a hay hoist or chopping hay, the overhead costs of owning and operating such a power unit is sharply reduced. Mr. Hayward knows this. His motor really takes a vacation while it is operating the silo filler. The rest of the year it is busy grinding feed.

A New Use for My Refrigerator

Hatching chicks with a refrigerator is unconventional. We don't recommend it for that purpose:—but here it is. EDITOR.

* *

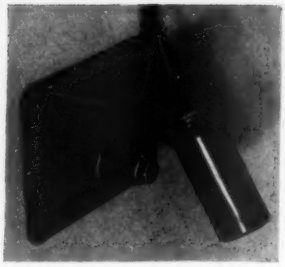
Recently, my refrigerator has been more than a food saver. One of my Rhode Island Red hens refused to perform her duty of hatching her chicks. There were eight eggs that I had given her from another nest so when she deserted her nest I took the eggs, wrapped them in an old sweater and placed them in the kitchen on top of my refrigerator which has a top unit. My effort was indeed productive resulting in six nice chicks that I definitely would have lost otherwise. They were on make-shift brooder five days and I put them with the hen at night. My new family of six is indeed healthy and my faithful refrigerator unconscious that a new duty has been imposed upon it.

MRS. EUGENE ACKLEY,
R. 2, Bend, Oregon.

Teacher—Next time you're late you'll have to bring an excuse from your father.

Henry—Oh, he isn't any good at excuses. Mother finds him out every time.

Upper left: Eola school, built in 1858 and in continuous use for the past 80 years, is recognized as Oregon's oldest operative public school. Pupils in this pioneer schoolhouse suffered eye strain and fatigue because of uncontrolled and sometimes inadequate illumination. **Upper right:** In the new schoolhouse automatic control of artificial illumination provides pupils with glareless, even light upon the desk tops as needed. Even in this schoolhouse of latest design, tests indicate that artificial illumination will be needed about 35 percent of the time. **Left:** This "electric eye" attached to the classroom wall turns the lights off and on as they are needed.



SAFER SEEING WITH AN ELECTRIC EYE

By BEN MAXWELL

Mr. Maxwell is a farmer near Salem, Oregon. He grows sweet cherries.

AFTER 80 years of continuous service Eola schoolhouse, located 3 miles west of Salem and recognized as the oldest operative public school in Oregon, is now replaced by an up-to-date structure featuring modern facilities unknown and undreamed of by Oregon pioneers who built the original schoolhouse in 1858.

Besides indoor plumbing and thermostatically controlled heat, new Eola school is in the vanguard of progress with automatic, photo-electric control of artificial illumination. This new device, now available at moderate cost, was approved by school directors because it contributes toward safer and more effective seeing for the school's 25 pupils.

Automatic light control for artificial illumination consists of a photronic tube, frequently called an "electric eye," that is connected to a series of relay switches whose mechanical job it is to automatically turn the lights off and on when illumination rises or falls below a predetermined level. At Eola school the electric eye is attached to an inside wall where it maintains a constant vigil over illumination over the pupils' desk tops. Then, when natural light falls below the established level, the eye registers this deficiency through the relay switches and automatically turns on an inside row of lights consisting of three fixtures, each containing a 300 watt globe.

Even in this new schoolhouse of latest design, tests with a light meter indicate that artificial illumination will probably be needed 35 percent of the time for safe seeing. Automatic light control assumes this responsibility by turning power off and on and supplying the standard 24x36 classroom with a glareless, even illumination devoid of shadows and approximating natural, outdoor light when the sunlight is diffused by clouds. Six modern ceiling fixtures constructed of electrically processed aluminum provide high efficiency at very low lighting cost. Half of the six fixtures in the classroom are subject to automatic light control.

Installation of photo-electric light control, including labor, cost Eola school less than $60. Any competent electrician can do the job and when the "eye" is adjusted to any point for illumination control it will maintain this adjustment indefinitely because there are no delicate parts of elements that can materially change the relay characteristics. Such an installation will last the life of an ordinary building and the only cost of maintenance will be an occasional replacement of the standard radio type tube.

(*More on page 26*)

Electrical HOUSEKEEPING

Conducted by GAIL MEREDITH

"WASH PLACE"

A Vanishing Institution

By Caroline S. Coleman

"WHERE is your wash-place?" a visitor asked my neighbor and the neighbor pointed to a neat building in her back yard. "Shades of our grandmothers," exclaimed the visitor, viewing the interior of the building with its shining machinery, "you don't mean you have your washing done in here?"

The out of doors "wash-place" is peculiarly a Southern institution, a part of every well regulated Southern home. It did not vanish with the end of horse and buggy days, but lingers still, though modern methods are creeping in.

A huge black iron pot for boiling the clothes, a long-handled paddle something like a flat baseball bat and known as the "battling stick," an assortment of tubs and a rubbing board, constitute the standard equipment of the wash-place. Until recent years the rubbing board was unknown and a plentiful supply of "elbow grease" was requisite for cleaning clothes, while before the galvanized tub made its debut, wooden tubs heavy and hard to handle were used. Winter and summer the washing is done out of doors in the South. Some fortunate housewives have an open shelter for the tubs and the washerwoman while the pot boils outside. That the time would ever come when the washing should be done in a comfortable house

and electric power would do the work, our grandmothers never even dreamed. Almost on par with the cotton gin is the electric washer which takes over the drudgery of this heaviest job of housekeeping.

In earliest times our pioneer women established the wash-place near the spring at the foot of the hill. On wash days she first carried her clothes to the spring, started her fire around the pot and

went back to bring her babies down the hill where she could keep an eye upon them as she worked. She dipped her biggins into the spring, made innumerable trips to fill the tubs, washed, boiled and rinsed with more tubs of water, then carried her clothes up the hill again and came back for her babies. This great-great-grandmother of the modern housewife whose "elbow great" is supplied by the power line, had to wash heavy jeans trousers, and linsey-woolsey frocks, not to mention stout home-knit socks by the "skin of her hands." Literally by the skin, for the home-made lye soap left the hands raw where hard rubbing was necessary.

After the clothes were dipped from the boiling suds and laid on a bench or wooden block, the battling-stick was freely applied. This implement was a wonder for making the grime fly, but hard on the clothes. One wonders how long present-day underwear would survive the sessions with the battling-stick.

With changing times in the South, slaves were purchased and they did the washing. The battling and boiling were accompanied with the rhythm of the Spirituals, even the clothes were hung on the line with rhythmic movement by the singing washerwomen. After the war and Reconstruction colored women were hired by those that had the means, to do the washing. The colored woman has always loved this task better than one that requires long hours. Many of them make a good living by their washings. "Yes'm, I can soon turn

off a washin'; jes let me get out to de wash-place an' gimme a good battling stick," says Aunt Betsy.

Since the topsy turvy situation brought on by the various lettered agencies, many of our former faithful workers are now looking to "De guvmint" to support them and no longer interested in earning a living.

My little neighbor grew tired of depending on uncertain help, so she purchased a good machine and her husband built the little house which is a miniature laundry. A heater is installed for furnishing plenty of hot water, tubs, ironing boards and every convenience to make laundry work a joy she has here. Her husband is an expert automobile repair man, and his cover alls the machine cleanses perfectly without the assistance of human hands. "I only handle the clothes when I hang them on the line," she says.

The entire cost of the outfit including erection of the house was little more than $200, and the cost of operation is only a few cents each week. Any farm home could have these silent slaves which bring to the Southern house wife the first freedom from wash-day worries that she has known since the dream-days of long ago when there were willing hands to labor at the picturesque wash-place.

• • •

For Better Biscuits

THE best biscuits are mixed quickly, baked in a hurry, and served while they are still hot enough to melt the butter before you can reach for the raspberry jam.

So you can stir them up without delay, it is a good thing to get all the ingredients out first. In fact, mixing most doughs and batters goes better if you have the materials at room temperature rather than refrigerator cold. They blend more evenly and quickly. Of course, in very hot weather, you have to use your own good judgment about letting them stand too long in a warm room.

Next get the pans out, and then look to the fire.

Sift the flour before you measure it, then sift it again with the baking powder and salt. The first recipe I ever used for baking powder biscuits said to sift three times, and it does seem to me that my biscuits are better when I take the time to do that. Next cut in the shortening until the mixture is about as grainy as corn meal. Make a well in the center of the flour and pour all the milk in at once. Toss the flour into it with a fork, stirring a few times around the edges of the bowl. Just as soon as the ingredients stick together, turn them out on a lightly floured board or a canvas cloth.

Or if you want to stir up your biscuits with your electric mixer, you can cut the fat into the sifted flour and baking powder at slow speed. Gradually add the milk, running the mixer a little faster until the dough just holds together. Then turn it out quickly.

Gather the dough into a ball and knead it very lightly until it seems smooth. This shouldn't take more than half a minute.

Just tuck the biscuits into a hot oven and look at the clock.

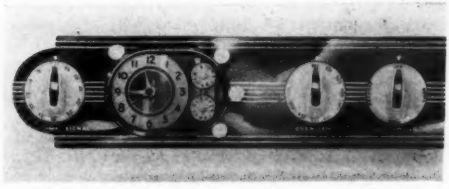
If you are uncertain about the amount of kneading to give the biscuits, you can use the folding method. In this you fold half the dough over on to the other half and pat it all out again to a half inch sheet. Then fold again and pat out. And once more.

This kneading and folding helps the dough rise straight and produces flaky, delicate biscuits that break apart in layers, more pronounced layers with the folding and patting out.

Either pat to the desired thickness, half to three quarters of an inch, or roll the dough out if you have a light hand with a rolling pin. Dip your cutter in flour and cut out the biscuits, dotting the tops with butter or brushing them with milk before you put them on the baking pan an inch and a half apart.

If you must make them a few hours before you are going to use them, you can put them, covered, in the refrigerator. But bring them out in time to let them stand for twenty minutes at kitchen temperature before you bake them.

Then put the pan in the middle of the oven and set the control at the temperature you like best. 400 to 450 degrees is the recommended tempera-



Set the temperature regulator at 450.

THE HARDEST JOB

(Winning Letter for June Contest)

Since reading Mrs. Gaskill's letter, I have felt ashamed of myself for whining that I do not like to dust. Here is a gallant letter from a woman I'm sure you will be glad to meet—as you surely will in the words she writes.

* * *

"If ever there has been conceived a harder job for women than cleaning house after a dust storm, I have yet to learn of it. It is such a stupendous task that I have never yet tackled it alone. Male members of the family, who come to my rescue on these distressing occasions, consider it a man-sized job.

"At the first indication of an approaching storm, I hasten to close windows and doors, and to cover furniture, though whether the latter precaution is of much advantage is problematical, for the fine dust penetrates every crevice air can enter. In spite of all we can do, the house is utterly unlivable after a few hours of driving and and dust.

"Little wavelets of dust decorate the walls, with showers of dirt descending whenever a picture or a curtain is touched. At every step, puffs of powdery dust rise from the soft dirt carpet on the floor. There is dirt on the furniture, dirt on the books, dirt on the dinner table, dirt, *dirt* everywhere. The snowy white dresser scarf is completely hidden. The dearly-loved features of an absent member of the family are obliterated from the photograph on the desk; only a piece of brown pasteboard stands stiffly upright as a reminder of the picture we cherish.

"Bedtime comes at last, and with it a cessation of hostilities, but cleaning house is out of the question now. Miserable, we shake out the covers, crawl in between the sheets, and dread the morning.

"After hours of hard labor for all hands, along toward evening some semblance of order is restored. We begin to feel that life is worth living again; that, after all, 'God's still in His heaven and all's right with the world'. Alas! More than likely we are visited by another storm next day, more severe than the first, and often by still another on the following day.

"This is a doleful tale, but it has a happy ending. Since 1929, when the electric company extended its lines to supply power for irrigation pumps in our community, I have enjoyed the conveniences of electricity in our home. I can bear the storms with greater fortitude, knowing that the vacuum cleaner will help clean house, and that the electric washer will take care of the grimy clothes. The electric refrigerator, which I had planned to use only during the hot months, proved its worth the first winter after we bought it. It is one place where food can be kept absolutely

(*More on page* 21)

NO one appreciates more than the youngsters do, the comfort, convenience and sanitary protection afforded by a reliable MYERS Water System. And years later, after they have grown up, they will appreciate just as much the wonderful durability and remarkably low operating cost of that same MYERS. Your children's children may well enjoy the MYERS Water System that you install now. Deep well and shallow well models to meet all needs; for operation by electricity, gasoline engine, windmill or hand power.

No Need to Wait for Electricity

Until the power line reaches you, enjoy running water with a MYERS Gasoline Powered System, which can later be converted to completely automatic electric operation by simply mounting an electric motor in place of the engine. Write us or ask your dealer.

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Send free information on items marked and name of your nearest dealer.

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Take Off Your Hat to the MYERS

ture, with ten to fifteen minutes the baking time.

After you have tried biscuits on your pans in your oven at these temperatures and found just the

You can brush them with butter and turn them over like this for Parker-house rolls.

temperature and time that gives you the browning and the crustiness and the tenderness that you like, make note of the temperature and the time so you can stick to them in your future baking.

Baking Powder Biscuits

2 cups flour — 1 tsp. salt
4 tsp. baking powder — 4 tbsp. shortening
¾ cup milk

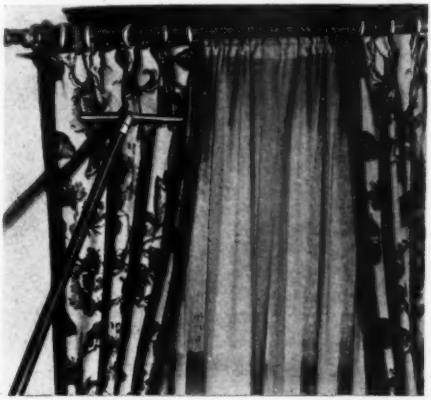
For CHEESE BISCUITS rub one-half cup grated cheese into the flour with the fat.

For ORANGE BISCUITS add 2 tablespoons grated orange rind to flour fat mixture. After you have cut out the biscuits dip one-half piece of loaf sugar into orange juice and press into the top of each biscuit.

• • •

The GOOD HOUSEKEEPER

WHEN school begins in the fall, the whole household settles back to a different routine. It is a new year for us as well as for the children because their schedule is bound to change



ours, too. And New Years, everybody knows, is the time for good resolutions and starting over.

There are countless ways of making a new start. Perhaps you've determined that this year you will learn to cook vegetables so well that the children will always clamor for seconds. Maybe you're going to learn to sew. Perhaps you are going to make yourself a better housekeeper.

We are all interested in that if we have houses to keep. And it is a good thing we are, for no matter how little money we may have to spend for things for the house, good housekeeping gives us the power to endow our houses with that one enduring charm that goes so far toward redeeming even an ugly room and indifferent furnishings—perfect cleanliness.

Cleanliness is such a lovely habit that I'm not at all surprised that our Puritan ancestors—I suppose they *were* the ones, set it right up next to godliness in the list of Christian virtues.

So you see if you've decided you are going to learn how to have a cleaner house with less effort, you will find yourself in good company.

There are all kinds of ways to start on a study of this kind. One of them is dirt prevention. You might decide that chicken tight fences and concrete walks in the yard were the first thing to have. But if you can't have these, you can surely set up a foot scraper and a mat at both the front and back doors. Then train everyone in the family to use them on wet days.

A rug at the foot of the cellar stairs and another at the top of the attic stairs save tracking dust into the rest of the house.

It helps to have some convenient place for rubbers and galoshes. If the children take theirs off outside, a box with a hinged cover would hold them safe from rain and snow. If they bring them indoors, perhaps such a box built like a seat and set near the door would persuade them to sit down, take off their galoshes and pop them inside out of sight before they track up the floor at all.

Another step in learning to set your house in order quickly and efficiently is having the right tools. It is wise to get as many things as you can to save your hands and to prevent stooping and reaching.

Have you a long-handled brush to wipe off the walls? The next best thing is a couple of bags of canton flannel to tie around the broom for this dusting. You can wash the bag clean after each using so it will keep the wall clean.

A self-wringing mop saves hands and work.

You will find use for several small odd shaped brushes for the places that are hard to get at. Look around at the dime store the next time you are in town. You can get loose cotton gloves for dusting there. Rubber gloves for the wet jobs are hand savers, too.

Vacuum Helps Save Rugs

If you haven't a vacuum cleaner, it will pay to give some study to the help it can be in giving you a cleaner house with less effort.

You may be thinking that a vacuum cleaner just cleans the rugs. It does more than that. It makes them look better and staves off undue wear. Because the cleaner gets out the dirt that has sunk way down into the back of the rug, the sharp gritty dirt that cuts the threads, using it prevents this wear.

Dragging rugs out doors, stretching them over a line and hammering at them with a metal beater,

(*Here from page* 19)

free from dust, even during our worst storms. The electric lights, always a joy, are never more welcome than on those evenings when the storm rages until bedtime. What a time I used to have with the kerosene lamps! How the flame sputtered, and flared, and smoked the chimney! Often, when a door was opened, the light would be blown out, leaving us in darkness.

"After years of pioneering without the aid and comfort of electricity, I can never regard it as commonplace. I doubt if I shall ever acquire the habit of snapping on a light casually, with no sense of appreciation. I think, rather, that in the coming years I shall continue to experience, often, a thrill of pleasure at the marvelous response to the mere pressing of a button, to the simple turning of a switch."

—ELLEN OGBURN GASKILL,
Deming, New Mexico.

is not easy on the rugs. It may break threads and loosen bindings before you know it. Shaking a rug by holding it at one end is even worse.

A vacuum cleaner works best when there is an unbroken current of air flowing through the bag. If the nozzle is too high, above the nap, that air rushes over the top of the rug, not through it. If it is pressed too close into the nap, there is no room for proper agitation.

The folks who work with vacuum cleaners say that you have one adjusted at the right height if you can slide a pencil under the nozzle.

By lowering the nozzle, you can clean bare floors and linoleum. Just moving it over the bedroom floor whisks up those little curls of fluff that roll up under the bed as soon as you turn your back on the room. You can run it up against the baseboard and dust out the cracks beneath the molding.

Just lift it up on the bed and go over the mattress thoroughly. To be sure you will have to use the attachments, a small cleaner, or the whisk broom for the edges, but you'll get a lot of dust from each side of the mattress.

The attachments for new cleaners are lighter and

September Contest

Probably it has never been written down on paper the way the children write down their schedules for classes at school, but I know you all have some system for getting your week's work done. A letter about the way you plan your work is the contest for this month, MY WEEKLY SCHEDULE.

The writer of the winning letter will get five dollars.

If we use your letter later we will pay you a dollar for it.

The contest closes September 20.

Gail Meredith, 1026 Seminole Highway, Madison, Wisconsin.

INVE$T
IN
Running Water
AERMOTOR
Electric
WATER
SYSTEMS
FACTS
Send for this FACTS BOOK
WHETHER your well is deep or shallow there's an AERMOTOR ELECTRIC WATER SYSTEM for it which offers you a sound investment . . . complete security against future water trouble.
Modern exclusive features . . . Quiet operation . . . Long life . . . Freedom from trouble . . . Moderate price. All these advantages combine in the AERMOTOR to give you a permanent farm improvement which ends expensive upkeep and helps you save money.
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more easily put on and off than the old ones were. With a long hose, you can dust the living room curtains without taking them down; you can nose around book shelves and along the upper reaches of a closet, over doors and windows, back of pictures, and all of those places so hard to get at standing on a chair.

A dusting tool on the big cleaner or a small

hand cleaner will keep the dirt out of chairs and davenport.

When you have satisfied yourself that you have gathered together all of the cleaning equipment that you need, the next step is planning a place to store it. A shallow closet with hooks for the brooms and mops and brushes, floor space for the vacuum cleaner, and shelves for cleaning cloths, polishes, wax and cleaners is ideal. If you have wall space for it, maybe your husband will make one to fit the things you have.

A Letter from Elmer

(*Here from page* 12)

164 *feet of eaves-trough to reach around that overhang, and three down spouts to carry off the water. All that galvanized iron needed painting, too, for it was put up since the house was painted before. That sure makes a lot of mean, unhandy, neck-breaking painting with a brush. But with the spray gun I could paint a stretch of those eaves in about the same time it took to move and set up my staging.*

Besides the gutters, downspouts, eaves, and accompanying trim, I sprayed the following:

2 *outside doors, frames, and casings*
2 *screen doors*
5 *large window screens*
6 *small screens*
12 *small casement windows (frames and sash)*
2 *garbage cans*
1 *big, outdoor cupboard for garden tools.*

Most of our windows are wooden casements with small panes of glass, so I painted them with a brush instead of masking and spraying them. But when I had been around 119 *panes of glass in the living room windows alone, and found that took over* 420 *feet of careful painting along the putty right down to the glass, I began to wonder.*

On the cellar windows, I tried an experiment. Two I painted with a brush. It took 1 *hour and* 45 *minutes to paint them both and clean all paint off the glass. Then there were twelve cellar casements set in pairs in six frames. It took* 1 *hour and* 20 *minutes to completely mask them; only* 1 *hour to spray them well, and just* 30 *minutes to remove the masks and leave them slick and clean. A pair of the casements is really more than equal to one of the other cellar windows. Yet the average time on them was only* 28 *minutes* a pair *as compared with* 52 *minutes* a piece *for the brush-painted ones.*

On plain painting that doesn't have to be masked and cleaned up the advantage of the air brush is greater than that. Either on big areas or on rough irregular surfaces, I think the spray may easily be four times as fast as hand painting. Except on these cellar windows, I have never timed myself, but I believe on good going a man could cover 500 *to* 600 *sq. ft. an hour. You know, George, that means nearly a gallon of paint an hour, and that would certainly be laying it on.*

Since labor is much the biggest item in painting costs, cutting down the labor like that should help lots of farm buildings to a new coat of paint. The power expense is practically nothing. With all my fussing around, the meter I hooked up showed only 2.4 *Kw hrs, for the whole job.*

We are so tickled with the results I hope you will forgive my bragging at such length. Vera took some pictures while I was painting. They make me look a little like Frank Buck, but that helmet kept the spray out of my hair. I'll send them along for I want you to see how little and simple the outfit is.

Last spring we put a mothproofing liquid in the gun and moth proofed all our winter clothing in about 30 *minutes. And it's a dandy way to spray roses around the house, or any plants that can be reached. Better get yourself an outfit, George.*

Cordially yours,

Elmer,

"Pa," said Johnny, looking up from his composition, "is 'water-works' all one word or do you spell it with a hydrant?"

Couldn't Fool Him Twice

Joker (to new clerk in hardware store): "Give me two pounds of potato seed."

Clerk (after hunting vainly): "Guess we're all out. I'll tell the manager."

"That fellow was kidding you," said the manager. "Potatoes don't grow from seed."

Half an hour later an old lady came in and asked for a package of birdseed.

"Ha, ha!" laughed the clerk. "You can't kid me! Birds don't grow from seeds."

ON THE AIR

Conducted by JEROME J. HENRY

Shushes for Taylor Put Cart Before Horse

WHEN the Philadelphia Symphony plays over CBS stations on Sunday afternoons, 102 musicians sit mouse quiet waiting for the rap of the conductor's baton. When this time comes it means the orchestra must play and the audience in the studio must stop coughing and clearing throats. To the audience it means "Sh-h-h."

But when the intermission comes and the audience is free to make a little noise, the cart is placed before the horse and the orchestra gets vigorously shushed.

The reason for this is that a flight of stairs above them, in a little control booth with a square window commanding a partial view of the platform, Deems Taylor is telling the radio audience, "This is the Columbia Broadcasting System."

It is always at this point that the 102 musicians are climbing up the stairs for relaxation during the intermission. It is then that the members of the symphony whose every note is heard by millions find suddenly the reward for the pains is no more than "Sh-h-h."

The control booth through which music is served to millions is crowded when two are in it. The window of the booth may be opened and Deems Taylor could put his head out and find out for himself what's going on backstage. But then all the noise would come in and a music commentator could hardly be expected to discuss his learned subject in such a position.

• • •

They Laughed When I Sat Down to Play—

IF you're anaemic and run-down and look terrible in a bathing suit, take up organ playing immediately. It's great for building up your chest.

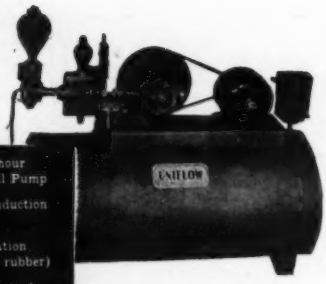
Fred Feibel, CBS organist for the past eight and one half years, is authority for this advice to flat-chested Romeos. When Fred first came to Columbia he wore a 36 suit and he practically had to pull his chest up by its three hairs to make it expand as much as two inches.

Now Feibel goes to the size 40 department when his wife takes him shopping for one of those double breasted suits she likes. And if you put a tape measure on his chest and ask him to breathe in, the tape will stretch four full inches, which is a lot better than many athletes can do.

"Organ playing gets all the credit," explains Feibel. "Like a lot of orchestra conductors I've fallen into the habit of holding my breath during the long passages. I didn't notice the effect at first, but when I found myself switching from size 36 to 38 and then to 40 I realized that pumping the bellows was the reason."

Feibel has been playing the organ ever since he was a youngster of 14; he learned how in church. An accomplished musician, he also plays the piano and violin, and has several compositions to his credit. His theme song, "Thanks to the Dawn," has just been published, and he's also written "Improvisations on an Original Theme" and "Springtime on Parade." Right now he is at work on a novelty rhythm series.

$69.00 FOR THE GEM "30"



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3. Silent Operation (mounted in rubber)
4. 30 gal. galvanized Tank
5. Air Volume Control
6. Pressure Gauge
7. Automatic Pressure Switch
8. Automatic Overload Relay
9. Relief Valve
10. Completely assembled in one crate

CORRECTION!

Item 2 at left should now read "Quiet Capacitor Motor." This follows extensive test trials in which the Quiet Capacitor Motor won its place in our "Gem" shallow well system. You'll be amazed with the quietness and economy of this motor. Just another step forward to make the "Gem 30" an outstanding value. Write for new catalog.

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WATER SOFTENERS — MILK COOLERS
ONE OF THE FIRST TO BUILD ELECTRIC PUMPS

Fastest, Finest Electric
COW CLIPPER
World Famous
STEWART
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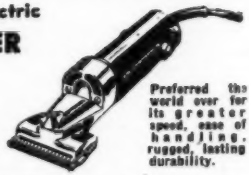
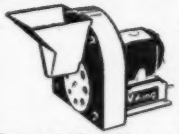


Preferred the world over for its greater speed, ease of handling, rugged, lasting durability.

Exclusive Stewart design ball-bearing motor is air cooled and entirely encased in the insulated **EASY-GRIP** handle that is barely two inches in diameter. Completely insulated—no ground wire required. The fastest clipping, coolest running, easiest-to-use clipper for cows, horses, dogs, mules, etc. Stays sharp longer. A $25 value for $17.95 complete. Slightly higher West of Denver. 100-120 volts Special voltages slightly higher. At your dealer's or send $1.00 Pay balance on arrival. Send for FREE catalog of Stewart electric and handpower Clipping and Shearing machines. Made and guaranteed by Chicago Flexible Shaft Company, 5524 Roosevelt Road Chicago, Illinois. 48 years making Quality products.

GRIND YOUR OWN FEED
SAVE — $1.80 PER TON
WITH VIKING HAMMERMILL



Impartial tests, that can be duplicated on your farm, show operating costs below 10 cents per ton. Let us prove this.

Charles Ness, owner and operator of the Mecker County REA Electrified Demonstration farm says: "For 2½ months this last winter I ground all my feed entirely on a Viking Junior Hammer Mill and fed 24 milk cows, 10 horses, 40 hogs and 300 chickens, which is a fact, as I did not use my 5-H.P. motor feed mill at any time."

Territory is open to live dealers willing to "Cash In" on the largest rural electrification program in history. Write or wire for full details.

VIKING MANUFACTURING COMPANY
JACKSON, MICH.

How Many Have You?

There are hundreds of practical ways for applying electricity on your farm today! But the selected list below includes only those that no modern progressive farmer can afford to overlook.

So, check up and investigate today. Many of your questions can be answered by our advertisers. For any information that you can't get through our advertisers, fill out and send in the handy coupon below.

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___Radios
___Ranges
___Refrigerators
___Roasters
___Sewing Machines
___Toasters
___Vacuum Cleaners
___Water Heaters
___Water Softeners
___Water Supply

Gen'l Farm Equipment

___Auto Engine Heaters
___Corn Shellers
___Ensilage Cutters
___Feed Grinders
___Feed Mixers
___Hay Choppers
___Hay Hoists
___Insect Killers
___Motors
___Stock Tank Heater
___Threshing Machines
___Ultraviolet Light
___Ventilators
___Wood Saws
___Yard Lights

For Dairy Farm

___Animal Clippers
___Bottle Washers
___Churns
___Cream Separators
___Dairy Sterilizers
___Milk Coolers
___Milking Machines

For Poultry Farm

___Brooders
___Burglar Alarms
___Drink. Fountain Warmers
___Egg Cleaners
___Egg Graders
___Incubators
___House Lighting

For Truck & Fruit Farm

___Fruit Graders
___Fruit Polishers
___Fruit Washers
___Irrigation Equipment
___Light for Plant Growth
___Soil Heating
___Stationary Spray Plants
___Vegetable Washers

For Farm Shop

___Bench Saws
___Drills
___Paint Sprayers
___Soldering Irons
___Tool Grinders
___Welders
___Woodworkers

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ELECTRICITY ON THE FARM
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Without cost to me, please have manufacturers send complete information on the following Electrically Operated Equipment which I am thinking of buying:

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My name is .....
Address .....
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Replacing Worn Iron Pipes

Reduced water flow and pressure through iron pipes is common in water supply systems of several years installation. Examination often reveals pipes practically plugged by calcium and iron deposits. Such pipes can be cleaned out by reaming but this is not a recommended practice since deep pitting of the pipe walls generally accompanies cementation. Replacement is recommended.

This job is made easier and the necessity for frequent changes eliminated by the use of the new flexible copper tubing water pipes with the soldered slip joints. The pipe permits bending and so eliminates many unions, couplings, elbows and other fittings common to the old style layout.—*W C. Krueger. New Jersey Extension Service.*

Precooling Cuts Cost of Long Shipment for Fruits and Vegetables

Show the farmer a way to save money and he will save it.

Fruit and vegetable farmers were quick to adopt the practice of precooling their produce before shipping when specialists of the United States Department of Agriculture proved the advantages, both to farmers and consumers.

Precooling lowers temperatures more uniformly and rapidly than transit cooling from ice in refrigerator car bunkers. Every hour of delay in cooling fruits and vegetables after harvest lessens by several hours the time they may be successfully held in storage and decreases the chances of getting them to market in good condition.

Precooling not only gets produce on the market in better shape, but saves transit refrigeration cost —a big item when fruits or vegetables are shipped thousands of miles. For example, precooled pears are now shipped from Medford, Oregon, in 720-box loads and arrive in New York in as firm condition and as suitable for marketing or storage as similar nonprecooled fruit in the conventional 520-box load.

Since the cost of transit refrigeration is a flat charge per car, growers of the Medford area, who ship 4,000 to 5,000 cars of pears annually, save an estimated $252,000 annually on transit refrigeration costs, says Durward F. Fisher, in charge of refrigeration investigations for the Department.

All experience is an arch, to build upon.
Henry Adams

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Real Quality Tools
Designed, manufactured and guaranteed by SpeedWay, for 30 years leading manufacturers of industrial drills, these are really fine tools, correctly designed, correct speeds, genuine high torque drill motors. Small, handy, powerful; 1000 R.P.M.—drill handles to ¼" in steel. Die cast handle and gear housing. $7.95. 20,000 R.P.M. Grinder with collets for 1/16" and 3/32" arbors, equal in every way to grinders costing several times $5.95. No. 250 KIT, both drill and grinder with 5 accessories in steel carrying case. $14.95. Complete line of accessories and drill press stand. Write for circular.
DRILL $7.95
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1849 S. 52nd Av. Cicero, Illinois

Questions and Answers

Cold Storage for Bulbs

Question: *Where can we buy a cooling system for a bulb cellar similar to the apple storage described in the August issue?* B. H.

Answer: All of the large companies selling refrigeration equipment such as General Electric, Frigidaire, Carrier Engineering Corp., York Ice Mch. Co., Westinghouse sell the necessary cooling equipment. Most of these companies have engineers who will assist with design problems.

Slight Shock from Switch Plate

Question: *Sometimes when I snap the switch in our living room I get a little shock. What might be wrong with our wiring? A good contractor did it.* E. L. G.

Answer: There is probably nothing wrong with your wiring. If your wiring is in BX or conduit and the switch plate is metal it is grounded—which is proper. If you drag your feet on some carpets you will generate static electricity. When you touch the switch plate the charge in your body jumps to the plate and through the wiring to ground. You would get the same shock from a grounded radiator or water pipe.

Pressure Water System

Question: *I am thinking of putting in a pressure water system. My well is 360 ft. from the house and 15½ ft. lower. During dry summers the water is down 21 ft. in the well but it rises in wet weather. Can I use a shallow well pump or would a deep well pump at the house work O.K?* S. W. N.

Answer: A shallow well pump will not be satisfactory unless placed in a pit or otherwise lowered to within about 15 ft. of low water. New pumps may raise water a greater height but they may give trouble later. If a deep well pump is used, it must be placed over the well. You might save enough on the cost of pipe to pay you to put down a new well at the house and use a deep-well or jet type pump.

Soil and Brooder Heating Cable

Question: *Where can we get soil heating cable and thermostats for use in a brooder as described in the February issue? Where can we get information on heating with soil heating cable and thermostats? How can we make our brooder hold an even temperature?* S. O.

Answer: Electric soil heating cable is made by General Electric Co., Schenectady, N. Y.; Rockbestos Products Corp., New Haven, Conn., and the General Cable Corp., New York City. Thermostats are made by the General Electric Co. and the Penn Electric Switch Co., Des Moines, Ia. Brooder thermostats for controlling air temperatures may be purchased from the Lyon Electric Co., San Diego, Cal. Soil cable may usually be purchased

You NEED running water NOW

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2 sizes—1 to 5 H.P.
Small Grains, Ear Corn and Roughages
Greater Capacity per K.W.H.

SELLS AT A NEW LOW PRICE

The C. S. BELL CO
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Since 1858

FOR MORE WINTER EGGS
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Thrifty poultrymen everywhere use Tork Clocks to increase winter egg production. Simple hen-house lights pay big profits. Users say costs are as low as ½c per hen per month. Ask how.

NEW LOW PRICES

Self-starting Tork Clocks (no winding) give the most dependable service. New '38 models. Single Pole type for up to 2500 hens, $12.75.

Send dealers name and Ask for FREE Bulletin and COST data.

THE TORK CLOCK CO., INC., Mount Vernon, New York

USE TORK POULTRY CLOCKS
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from General Electric Supply houses and from some greenhouse supply dealers. Manufacturers will supply booklets telling how to use it. Some agricultural colleges also put out bulletins. Cable for soil heating is used in lengths of 60 ft. and will use 400 watts on a 115 volt circuit. Longer lengths use less current. A 75 ft. length will use about 350 watts. Temperature control in a brooder depends upon the thermostat (providing the heating elements are large enough). File the contact points on your thermostat if they are pitted or burned. Some thermostats are more sensitive than others. The manufacturer of your brooder should help you if you are having difficulty.

Motor Size for Hammer Mill

Question: *I have a Stover hammer mill No. 87. Am using a 26 hp. gasoline engine to pull it. What size electric motor would it require?* J. M. J.

Answer: The manufacturer recommends 5 to 8 hp. for operating this mill at 2900 to 3200 rpm. A 7½ hp. motor should pull it very satisfactorily.

Is 110-Volt Welder Practical?

Question: *Is a* 110 *v.* 60 *cycle welder practical for welding, say ½ to* 1 *inch steel or castings? Can I build my own? If so how?* R. L. S.

Answer: A welder which may be used on a 110 v. 60 cycle circuit is practical for light work such as fenders and iron up to ¼ inch in thickness. With patience and expertness it is possible to weld heavier material, but you should not expect too much of these low-powered welders. If taken for what they are capable of doing, they are handy tools.

110 volt circuits are not ordinarily wired or fused heavy enough to handle a heavy duty welder.

We would not recommend building your own equipment. It would very likely cost you more in the end than to buy, unless you are an expert electrician and designer.

Safer Seeing with an Electric Eye

(*Here from page* 16)

Automatic lighting for rural schools offers five distinct advantages. First: when installed in conjunction with well planned lighting it assures correct utilization of light for best results and efficiency. Also, it maintains the correct illumination level and prevents eye fatigue and injury. Directors will appreciate the factor of economy since it turns the lights off and on as needed and prevents any waste of power. Teachers endorse it, too, because it makes manual control of lighting unnecessary and saves effort and attention. Finally it increases the pupil's effectiveness by assuring the correct illumination level for his eyes at all times and reduces the percentage of class failures.

Experience seems to be like the shining of a bright lantern. It suddenly makes clear in the mind what was already there, perhaps, but dim.
Walter de La Mare

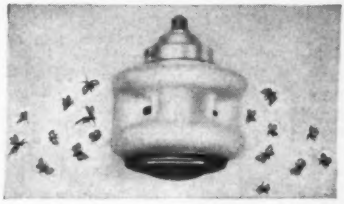
He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine receives light without darkening me.
Thomas Jefferson

Reviewed by T. E. HIENTON

Names and addresses of manufacturers of the articles described in this column will gladly be furnished upon request to What's New Department, ELECTRICITY ON THE FARM, *24 West 40th Street, New York, N. Y.*

Electric Light Trap for Insects

Electric traps for controlling insects of various types have been appearing in greater numbers. A distinctly different type of trap is a new product of an eastern manufacturer of lighting equipment. This insect trap resembles a kitchen lighting unit



in appearance and construction. An outer globe with three funneled openings through which insects enter, encloses the 100 or 150-watt lamp used with it. Insects are trapped within this globe and may be disposed of through a removable bottom.

New Publications

"BUYING ELECTRICAL EQUIPMENT," Circular 27, State College of Washington, Agricultural Extension Service, Pullman, Washington, 1937.

"FARM LIGHTING," Circular 374, University of Missouri, Agricultural Extension Service, Columbia, Missouri, January, 1938.

"ELECTRICITY AND MAGNETISM," Rural School Leaflet Number 4, Cornell University, Agricultural Extension Service, Ithaca, New York, March, 1938.

"REFRIGERATED FOOD LOCKERS," Circular Number C-107, Farm Credit Administration, Washington, D. C., May, 1938.

—I'm proud I am a Farmer—

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LYON FLY ELECTROCUTORS ARE CHEAPER THAN SPRAY. Safe, Effective, Economical, Guaranteed. Free circulars. Also catalog of largest all-electric poultry supply lines. Proven money-saving brooders, parts for homemade equipment, burglar alarms, ventilators. Advisory service without obligation. Write today. LYON RURAL ELECTRIC CO., Dept. EF, San Diego, California.